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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,169	11/12/2003	Robert DeHaan	4415.29USD1	8239

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EXAMINER	
NGUYEN, TAM M	
ART UNIT	**PAPER NUMBER**
1764	

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/712,169	DEHAAN ET AL.	
	Examiner	Art Unit	
	Tam M. Nguyen	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 6-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 6-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4 and 6-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wittenbrink et al. (WO 97/14769).

Wittenbrink discloses a process for producing a synthetic middle distillate having a cetane number higher than 70. Synthesis gas, hydrogen and carbon monoxide are fed to a Fischer-Tropsch reactor to produce a hydrocarbon stream which is then passed into a separation zone to produce a 700° F- fraction (first light fraction) and a 700° F+ (first heavy fraction). The heavy fraction is then passed into a hydroprocessing unit (e.g., hydrocracking) to produce a product which is then blended with a portion of the first light fraction to produce a mixture. The mixture is then separated into a second light fraction, a middle distillate, and a second heavy fraction. Simone also teaches that the Fischer-Tropsch product may be hydrotreated to eliminated unsaturates from its. The middle distillate comprises at least 95 wt.% paraffins with an isoparaffins to normal paraffins ratio of about 0.3 to 3.0. (See page 2, paragraphs 1 and 2; page 3, paragraphs 1 and 3; page 5, paragraphs 1-4; page 6, paragraphs 3-5 ; page 7, paragraph 2)

Wittenbrink does not disclose that the middle distillate is separated from the effluent from the hydrocracking unit before blending with a portion of the first light fraction which has been hydrotreated, does not disclose that the heavy fraction of step (b) has an isoparaffins to n-paraffins ratio of between 4:1 and 14:1 or 21:1, and does not specifically disclose that the light fraction is blended with the middle distillate in a volume of 84:16.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Wittenbrink by hydrotreating at least a light fraction and blending the hydrotreated light fraction with the middle distillate was claimed because the hydrotreating would remove contaminants (e.g., unsaturates and heteroatoms) and because the majority of the first light fraction boils within the boiling ranges of the middle

distillate. Therefore, it would be expected that the results would be the same or similar when blending the light fraction with the middle distillate either before or after the separation step.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Wittenbrink by producing a heavier fraction having an isoparaffins to n-paraffins mass ratio as claimed because it is within the level of one of skill in the art to produce a heavier fraction having such ratio to provide a product that meets a certain requirement.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Wittenbrink by blending the middle distillate with at least a portion of the first light fraction in a volume of 84:16 because it is within the level of one of skill in the art to select any volume including the claimed volume to provide a product that meets a certain requirement.

Response to Arguments

The argument that Wittenbrink does not teach or suggest hydrotreating at least some of the light fraction before blending with the middle distillate is not persuasive because of the new rejection above.

The argument that there is no basis for a person of ordinary skill in the art to hydrotreat at least some of the light fraction before the blending step is not persuasive. It is known that a fuel containing a low amount of heteroatoms is highly desirable. Therefore, hydrotreating the light fraction would improve the properties of the fuel.

The argument that Wittenbrink does not teach the claimed mass ratios is not persuasive because the examiner maintains that it is within the level of one of skill in the art to select any mass ratio including the claimed ratios to provide a product that meets a certain requirement.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam M. Nguyen whose telephone number is (571) 272-1452. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tam M. Nguyen
Examiner
Art Unit 1764

TN